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The effect of donors' policy coherence on growth

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Abstract

The literature has shown that aid and trade or aid and migration are not independent from each other: aid can be provided for relaxing migration pressures or donors can tie aid in order to increase their exports to developing countries. This finding can be generalized to other donors' policies: investment, technology, environment, security policies and it must be incorporated in the way aid effectiveness is assessed. The effect of aid can be dampened of enhanced, depending on whether aid is a substitute or a complement for other policies. In other words, donors should be consistent to be efficient. Taking advantage of CGD indices, this paper estimates growth equations by controlling for consistency. We estimate a robust and significant positive effect of donors' policy coherence from 22 DAC donors on the economic growth in developing countries. A one standard deviation increase in consistency changes results in an increase in economic growth in developing countries of 14%.

Abstract

La littérature économique montre que les politiques d'aide ne sont pas indépendantes des politiques migratoires ou commerciales: l'aide au développement peut en effet être allouée pour soulager les pressions migratoires ou pour accroître les exportations des entreprises nationales vers les pays receveurs à travers "l'aide liée". Ce résultat peut être généralisé à d'autres politiques: environnementales, technologiques, d'investissement ou de sécurité et doit être pris en compte dans la façon dont l'efficacité de l'aide est appréhendée. L'effet de l'aide pourrait en effet s'avérer plus important selon sa substituabilité ou sa complémentarité avec les autres politiques. En d'autres termes, les donateurs devraient être plus cohérents afin d'être plus efficients. Tirant profit des indicateurs du CGD, cet article estime des équations de croissance

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tout en contrôlant par la cohérence. Nos résultats mettent en évidence un effet significatif, positif et robuste de la cohérence des politiques de 22 donateurs du CAD sur la croissance économique des pays en développement. Une augmentation d'un écart type de la variation de la cohérence des politiques conduit à une hausse de la croissance économique de 14% dans les pays en développement.

1 Introduction

In the literature about aid effectiveness, two strands can be distinguished. The first highlights the characteristics in the recipient countries, while most recent studies have emphasized the importance of aid predictability and volatility, which are more under the control of donors. Besides, the analysis of the aid allocation determinants suggests that other motives than fighting for growth in poor countries can be at the origin of the aid allocation, which in turns explains why growth will not materialize in the recipient countries. This paper belongs to this second strand; it is more interested in the donors' motives behind the decision of providing financial aid. Berthélémy et al. [2009] demonstrate that aid and migration policies are substitute, which implies that aid can be provided for relaxing migration pressures and is accompanied in the case of candidate Eastern European countries by a tightening of migration policies. More generally, this paper questions the consistency of the whole set of policies from OECD countries towards developing countries, as identified by the CGD (Center for Global Development). It echoes the debate about the policy coherence of OECD countries, which has been widely recognized as a core concern to achieve international commitments and to sustain economic development in developing countries.

In 2010, the United Nations[1] pointed out that "the monitoring and evaluation process for policy coherence also remains a challenge". The OECD also stressed the need to take measures that ensure the coherence between DAC donors policies and the objective of economic development. In the report "Effective Aid Management: Twelve Lessons from DAC Peer Reviews"[2], one of the issue addressed by the DAC peer review is "Achieving greater policy coherence for development" (third lesson). New challenges faced by donors are highlighted: "Set a clear mandate and establish mechanisms to ensure that policies are assessed for their impact on poor countries". Similarly, the European Commission has undertaken to elaborate and apply the Policy Coherence for Development in 12 policy areas[3]. In 2009, the EU has committed itself to give increased priority to 5 areas: trade and finance, climate change, food security, migration and security. Every 2 years, EU implementation reports assist member states in adopting policies coherent with development objectives.[4]

In conclusion, policy coherence has gained support across the international organizations, especially to assist poor countries to achieve MDGs. Our coherence index addresses all the policies areas recognized as core concerns for development and allows us to assess the relevance of PCD (policy coherence for development) and to measure the effect of such reforms.

The remaining of the paper is structured as follows. Section 2 provides a short review of the literature. Section 3 presents the dataset on which this paper relies, namely the Commitment to

[1] See Santos-Paulino [2010], UNU WIDER Policy Brief

[2] See Manning and Hradsky [2008], OECD publication

[3] European consensus on development, 2005, [Official Journal C 46 of 24.2.2006]. The twelve areas are : trade, environment, climate change, security, agriculture, fisheries, social policies (employment), migration, research, information technologies, transport and energy.

[4] The last report is Commission [2011].

Development index (CDI) provided by the Center for Global Development. This CDI describes the quality of aid provided by each donor to all beneficiaries. To have an indicator of the aid received, we propose in section 3 a methodology based on the weight of each donor to a recipient. Section 4 introduces a consistency index for each aid receiving country, which is simply the inverse of the Herfindahl index calculated with the components of the CDI for the average donor (following Macedo and Martins [2008]). In section 5 a growth equation is proposed, where the variables of interest is this consistency index and its dynamics. Section 6 summarizes our main results. Section 7 provides various robustness tests and section 8 concludes.

2 Aid effectiveness

Earlier research on aid effectiveness emphasized the conditions in the recipient country, under which aid generates economic growth. Amongst those conditions, strong institutions and sound policies (Burnside and Dollar [2000]) play an important role. Aid should be allocated towards virtuous countries, which enforce the Washington consensus. This conclusion has given rise to a large and fruitful literature. According to Hansen and Finn [2001] for instance, aid is effective in promoting average growth but may face diminishing returns. From a more technical point of view, the robustness of Burnside and Dollar's findings turns out to be fragile (Easterly et al. [2004]; Roodman [2007]; Rajan and Subramanian [2008]).
Searching for the conditions under which aid is efficient requires analyzing also the characteristics of both the aid, which is provided, and the donors' action itself. Important studies have addressed the growth-enhancing effect of aid under its different modalities: short term versus long term or budget support versus projects. They have also pointed the detrimental effect of aid unpredictability (Kodama [2012][5]). In the same vein, Chauvet and Guillaumont [2009] argue that aid volatility is detrimental to growth. Aid flows must be predictable and stable therefore.

A very recent strand of the literature stresses the importance of donors' coordination, which should be sought to restrict the negative impact of the aid proliferation on economic growth (Kimura et al. [2012]). The proliferation of numerous and small projects has been proved to have a significant negative effect on aid effectiveness, because proliferation rises administrative costs for recipient countries (Roodman [2006]; Acharya et al. [2006]). Coordination and specialization, which means that donors must jointly identify and select the recipient countries, and specialize in different aid area in order to avoid redundancies and proliferation, should be on the top of the donors' agenda. There is no empirical evidence of the complete achievement of these recommendations. Aldasoro et al. [2010] point out the large gap that remains between the donor commitments and the decisions that they made. Only few donors select countries and deliver aid to a small number of them, and few have focused on a limited number of sectors. The recognition of the importance of donors'

[5] one-fifth to one-third of aid can become ineffective due to unpredictability.

coordination is reflected in the Accra Declaration on Aid effectiveness (2005) and the Paris Declarations (2003).

Beyond the direct effect of aid, there are many indirect effects or channels, through which aid may or may not be efficient in promoting growth. According to Gomanee et al. [2005], who distinguish aid targeted to imports, to government spending and to investment, the main transmission mechanism is through investment. Cali and Te Velde [2011] examine whether aid for trade has an impact on trade performance. They describe four types of aid: aid for economic infrastructure, aid for trade facilitation, aid for productive capacity and aid for trade policy and rules. They report a positive impact of aid for trade on exports, essentially driven by the improvement of economic infrastructure. Osei et al. [2004], asking whether donors use tied aid to increase bilateral trade, do not find any evidence of a positive impact of the former on the latter. However, they report that largest donors tend to trade more with their aid-recipient countries. Wagner [2003] finds that higher levels of aid increase exports from donors to recipient countries. Bearce and Tirone [2010] point out that aid effectiveness is higher when aid is untied to large strategic benefits for donors. In the same vein, Berthélémy and Tichit [2004] suggest that beyond the objective of promoting growth in poor countries, aid can be explained by other motives than altruistic motives, which would undermine aid effectiveness. Berthélémy et al. [2009] have shown that aid and migration are substitute of complement depending to the initial level of GDP per capita. Similarly, Breunig et al. [2007] argue that trade and aid are substitutes.

For many authors, conflicts and political instability damage economic growth (Alesina et al. [1996], amongst others). Jong-A-Pin [2009] report that "instability of the political regime and civil protest are significantly related to long run economic growth and that a hundred percent increase of these dimensions is associated with a lower real per capita growth rate of two percent and one percent, respectively." Besides, political instability and foreign aid are related. The post-conflict countries double their absorptive capacity during the first post-conflict decade (Collier and Hoeffler [2004])[6]. Focusing on World Bank projects, Chauvet and Duponchel [2010] estimate that the success of projects is enhanced by peace duration and by supervision.

Our paper contributes to this very rich literature by questioning the multidimensional feature of aid. The latter can be understood as the mere official development aid (ODA) from developed countries towards developing countries. This understanding would fit the simplest definition of aid. But one can also consider that trade, migration, investment, technology, environment and security policies in developed countries towards developing countries are also key dimensions of pro-growth actions, that help poor countries. Abolishing trade barriers will allow trade partners to specialize where they have comparative advantages and to benefit from higher growth; favoring investment in poor countries can be expected to promote growth in those countries; developing actions against insecurity and war will also deliver growth dividends, etc. Aid has many dimensions, which are not

[6]More particularly, 3 years after the conflict.

independent from each other. One important contribution from that point of view is Berthélémy et al. [2009], who have shown that aid and migration are complement or substitute, depending on the level of GDP per capita in the developing country. This finding has important consequences for the issue of aid efficiency, while it can be generalized to the other policy dimensions. The fact that the development of ODA can go in hand with the hardening of migration, trade, investment, policies, must be incorporated in the way we measure aid effectiveness. The effect of aid can be dampened of enhanced, depending on whether aid is a substitute or a complement for other policies, which can go in the opposite direction. In other words, donors should be consistent to be efficient. To our knowledge, this aspect of the problem has never been investigated, and the originality of the paper is to fill the gap by highlighting the importance of consistency for explaining aid effectiveness.

3 Policies multidimensionality

This paper argues that the efforts of developed countries towards the promotion of growth in poor countries must be evaluated against the restrictions that are imposed on the free movement of goods, capital, and workers, whose effects on growth have been shown to be very influential (for an excellent summary see Harrison and Rodriguez-Clare [2010]). To investigate the importance of this multidimensionality on the effectiveness of donor policies, we take advantage of the *Commitment to Development index (CDI)* provided by the *Center for Global Development*. The center notes twenty-two donors on seven criteria from 2003 to 2010. We rely upon these seven CGD's indices. Our dataset comprises data for 81 recipient countries over 2003 to 2010[7].
The CGD evaluates the provision of aid by OECD countries by incorporating seven components: aid, trade, investment, technology, security, migration and environment. 22 OECD countries are covered: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Spain, South Korea, Sweden, Switzerland, United Kingdom and United States. Each indicator assesses the OECD-country policies according to their ability to promote development in developing countries and to achieve the international commitments.

- $Paid_{jt}$(Aid Index): It describes not only aid flows but also aid quality. Aid quality is assessed on the aid selectivity, the conditionality (tied aid) and the aid proliferation (a large number of small projects). Donors are penalized if they send more aid to the most corrupt countries or to the wealthier nations. CGD also rewards policies of tax benefits and/or of low tax rates for private charity.

- $Ptrade_{jt}$(Trade Index): It penalizes protectionist policies (using tariffs and subsidies) and takes into account tacit barriers (by measuring the share of imports from developing countries). The barriers to imports of goods (that are usually exported by developing countries) or the

[7]See appendix A for the list of countries

agricultural policies that encourage overproduction and that contribute to decreasing prices on international markets are especially considered.

- $Pmigration_{jt}$ (Migration Index): It penalizes countries that restrict migration. It rates donors according to educational and working integration of migrants from developing countries. It also rewards the OECD countries that allow immigrants to send money or return home with additional abilities. It penalizes countries that discourage unskilled immigrants.

- $Pinvestment_{jt}$ (Investment Index): It integrates two capital flows: FDI (foreign direct investment) and portfolio investment. Donors are rated on the promotion of "constructive investment", that supports economic development. It is based on the existence of domestic incentives and opportunities to invest in poor countries (such as public pension funds that encourage investment or such as insurance against political risks common in poor countries).

- $Ptechnology_{jt}$ (Technology Index): CGD ranks countries according to the domestic incentives to create and to disseminate new technologies across borders. Governmental support to R&D (using public funds or tax subsidies) is rewarded. It penalizes governments that sustain intellectual property rights by patents or copyright rules.

- $Psecurity_{jt}$(Security Index): It rewards governments that help to maintain peace by financial or human contributions to UN (or others humanitarian organizations). It also penalizes arms exports to authoritarian countries.

- $Penvironment_{jt}$ (Environment Index): It refers to sustainable development and ranks OECD countries in terms of preserving the environment (especially global resources such as the atmosphere, forests or oceans) or in terms of limitations of the environmental damage. It penalizes countries using resources disproportionately and it rewards the ratifications of treaties such as Kyoto Protocol.

Table 1 reports the descriptive statistics of the six CGD's Indices. The indices have been constructed from the donors' point of view, with the objective of assessing the quality of their overall policies. In this paper, we need the quality of the donors' policies towards each developing country. Therefore, we compute for each beneficiary country an index, which is the weighted average of its main donors' CGD scores. The weights we use are aid, trade, investment or migration shares as explained below:

$$P_{itN} = \sum_{j=1}^{22} (P_{jtN} * \alpha_{ijt}) \tag{1}$$

Table 1: Description of CGD's indices

Variables	Obs.	Mean	Std. Dev.	Min	Max
aid	193	5.395137	3.535469	.5866705	15.93125
trade	192	5.526042	1.625307	-2.1	8.8
investment	193	4.735844	1.054986	2.167164	6.435821
migration	193	5.186788	2.23862	.9188848	11.83085
environment	193	5.554053	1.496705	.9566727	8.408708
security	193	5.261874	2.12688	1.446391	13.82805
technology	193	5.072587	.9424673	2.570782	7.297703

CGD's indices are adjusted in order to obtain a 5.0 average in 2008, the reference year.The following table describes all indices for 22 donors over the 2003-2010 period.

Where j designates the donor, i the recipient country, t the year (t=2003 to 2010), N refers to the policy component ($N = 1, ..., 7$): aid_{jt}, $trade_{jt}$, $migration_{jt}$, $investment_{jt}$, $environment_{jt}$, $technology_{jt}$, $security_{jt}$. α_{ijt} refers to different weighs according to the type of index:

- $\frac{aid_{ijt}}{\sum_{j=1}^{22} aid_{ijt}}$ for N = Aid, Security, Technology and Environment and with aid_{ijt} referring to bilateral aid flows between the donor j and the recipient i. For i=Ukraine, and j=Germany, Japan, USA-the most important donors- in 2010, the values taken by $\alpha_{Ukraine,j,2010}$ are respectively 23%, 13% and 36%.

- $\frac{migrants_{ij2000}}{\sum_{j=1}^{22} migrants_{ij2000}}$ for N=migration and with $migrants_{ij2000}$ referring to the stock of migrants in each developed country j from each developing country i in 2000. Most Ukrainian migrants have chosen the USA ($\alpha_{Ukraine,USA,2000} = 49\%$) and Germany (23%) as the country of destination of their migration.

- $\frac{imports_{ijt}}{\sum_{j=1}^{22} imports_{ijt}}$ for N=trade and with $imports_{ijt}$ referring to the imports of each developed nation j from each developing country i. The most important trade partners of Ukraine in 2010 are Italy ($\alpha_{Ukraine,Italy,2010} = 27\%$ of total trade), Germany (19%), and the USA (10%).

- $\frac{FDIstocks_{ij2004}}{\sum_{j=1}^{22} FDIstocks_{ij2004}}$ for N=investment and with $FDIstocks_{ij2004}$ referring to the FDI stocks in each developing nation i from each developed country j in 2004. Most FDI located in Ukraine come from the USA ($\alpha_{Ukraine,USA,2004} = 82\%$)

A first approach to have an idea of the consistency of those policies is provided by simple correlations, which are reported in Table 2. Notice that we focus in what follows on the transformed P's indices, to assess the donors policies consistency from the beneficiary's perspective.

Table 2: Correlation of P's indices in levels

	Paid	Ptrade	Pmigration	Pinvestiment	Psecurity	Ptechnology	Penvironment
Paid	1.0000						
Ptrade	-0.0134	1.0000					
Pmigration	-0.1316	0.0950	1.0000				
Pinvestment	-0.0837	0.1149	-0.0380	1.0000			
Psecurity	0.4631	0.0281	0.0175	-0.0570	1.0000		
Ptechnology	0.4385	0.0347	-0.1869	-0.1318	0.3628	1.0000	
Penvironment	0.7387	0.0907	-0.2641	-0.0316	0.2263	0.6620	1.0000

Table 3: Correlation of P's indices in changes

	ΔPaid	ΔPtrade	ΔPmigration	ΔPinvestment	ΔPtechnology	ΔPsecurity	ΔPenvironment
ΔPaid	1.0000						
ΔPtrade	-0.0495	1.0000					
ΔPmigration	0.0020	0.1218	1.0000				
ΔPinvestment	-0.0367	-0.1312	-0.0140	1.0000			
ΔPtechnology	0.7077	0.0300	-0.0125	-0.0520	1.0000		
ΔPsecurity	0.6693	0.1032	-0.0490	-0.2095	0.6351	1.0000	
ΔPenvironment	0.7482	-0.1188	-0.0446	-0.0039	0.8224	0.5652	1.0000

Negative correlations (between P's indices, in levels but also in changes) reflect a lack of consistency. Policymakers typically assume that trade liberalization and foreign aid ultimately reduce international migration - that is, that trade and aid are substitutes for migration. If this is true, when trade liberalization is implemented and enforced by the presence of financial aid, there is no need for tightening migration policies. As a result, all components of aid can be expected to move in the same direction. Conversely, in cases of protectionist policies and drying aid flows, migration policy will tend to fight against the pressures arising from the lack of convergence. Our correlations support partially those expectations: the correlation between trade and migration policies, in level (0.0950) and change (0.1218), are positive but the correlation between trade (also migration) and aid policies, in level is is negative, while the correlation between trade and aid policies, in change, is negative.

The latter negative correlation can be explained as follows. In its simplest version, the Heckscher-Ohlin theory tells that trade liberal policies reduce international price differentials between factors, and this leads to a decline in international migration: this is called convergence. But if we add two realistic features, migration costs and imperfect capital markets, this substitutability between trade and migration vanishes. In Schiff and Wang [2008]), a particular attention is paid to the interaction between financial aid, trade and migration policies. The lower the labor income and the higher the costs of migration, which cannot be afforded in the real by resorting to capital markets, the more likely trade liberalization, foreign aid and migration policy, are to "complement" each other.

If, as a result of this complementary, migration and/or trade pressures increase, one can observe a demand for more protection against free trade and migration. Table 2 and 3 display indeed negative correlations between trade (as well as migration) and aid policies, in both levels (-0.0134 for trade and -0.1316 for migration) and changes (-0.0495 for trade and 0.0020 for migration). The negative correlation between migration policies and financial transfers is particularly applicable for south-north and east-west migration (Berthélémy et al. [2009]).

Actions that improve the security environment in developing countries are unambiguously favorable to growth. By reducing the probability of conflicts, they act positively on growth. The channel is direct (improvement of the business climate) or indirect (increase in the attractiveness for foreign investors and trade partners). By improving the growth perspectives, providing more security can be analyzed in the same terms as granting financial aid. The correlation with the other policies components can be expected to be negative if the improvement in the local conditions make countries more competitive, if it gives the potential migrants the means of moving away, or if, by pushing the capital away from the donors' countries, it creates a fear of capital delocalization. This is a matter of empirics. Table 2 reports positive correlation between the security indicator and all other indicators in levels, but investment (-0,0570). For what regards changes, the security index is positively correlated with all other indices changes, but migration (-0,049) and investment (-0,2095).

An issue that has become a matter of increasing concern in recent years is the link between trade and the environment. A common argument is that international trade has resulted in greater environmental degradation in developing countries (see Copeland and Taylor [1994]). In a consistent world, trade liberalization policies should be accompanied by more supply and demand for environmental protection. López and Schiff [2010] argue that natural resources depletion can be prevented through capital inflows (foreign aid) and labor outflow (openness by the North). Table 2 shows that environmental protection is positively associated with trade and aid, but not migration. Table 2 is supported by a recent analysis of the Europe's commitment to development (Barder et al.), showing that Europe as a whole performs better than most CDI countries on aid and environment, but less well in other dimensions such as trade, security and migration.

Facilitating the access to technology in developing countries can be warranted through different means: openness and liberalization policies, policies which favours the trade of commodities abundant in R&D, although many studies emphasize that simple openness is a more powerful driver of technological spillovers than exports abundant in R&D. In Schiff and Wang [2008], the analysis of the functioning of special regional integration frameworks, such as NAFTA, suggests that firms are significantly more likely to cooperate and transfer knowledge, than without such frameworks. Technological cooperation goes beyond liberalization policies. It depends upon special circumstances such as geographical proximity, or the exact content of the trade agreements. Those simple correlations provide a first idea of whether policies are complement or substitute. What we propose in the following section is a broader definition of consistency, based upon the seven policy components

of the CGD index.

4 Donors' policy consistency

Instead of focusing on two policies, this section takes a broader view. It investigates whether aid momentum is concentrated in some policies components (it is non consistent) or more evenly distributed (it is consistent). The underlying assumption is that a non-consistent and piecemeal aid strategy, where some donors' policies are implemented while others remain absent, will yield a negative outcome. In Macedo and Martins [2008] this negative outcome is explained by the theory of second best, according to which in a distorted system, reducing one distortion may actually worsen the outcome. Here the idea is slightly different, and is based upon two assumptions. The first assumption is that the restrictions that are imposed through capital, trade and migration policies generate distortions, and that relaxing one distortion can worsen the overall performance if other restrictions remain in place or if some are reinforced. The second assumption is that ODA and other policies may not be independent from each other. Migration policies and ODA have been shown to be substitute in Berthélémy et al. [2009]; in the same vein, financial transfers towards transition countries were thought as a way of addressing the migration pressures induced by the wage gap.

A simple way to capture complementarity is to measure the concentration of policy components by means of the Hirschmann-Herfindhal indicator and take the reciprocal of it as an index of policy complementarity. The methodology is borrowed from Macedo and Martins [2008][8].

$$\begin{aligned} Consistency_{it} &= \frac{1}{\sum_{N=1}^{7}(\frac{P_{itN}}{Overall.N})^2} \\ &= \frac{1}{\sum_{N=1}^{7}(\frac{\sum_{j=1}^{22}(P_{jtN}*\alpha_{ijt})}{Overall.N})^2} \end{aligned} \tag{2}$$

Where $Consistency_{it}$ stands for the complementary index between the N policy components for country i and in year t; $Overall$ is the simple average, year by year, for country i, over the seven policy dimensions indicated above. A higher value of $Consistency_{it}$ denotes a higher complementarity (and lower concentration).

The model is based on the idea that shifting from a situation where the rankings are at their minimum levels, while together producing a high level of consistency, towards a situation where all components are extended up to the point where they reach the maximum score (and complementarity yields again a maximum), is expected to influence positively growth. A reverse situation of

[8] For an interesting application to transition countries, see Coricelli and Maurel [2011]

simultaneous worsening of all policies may also lead to an increase in the consistency index in theory, while it would negatively influence growth. We do not find such cases of increase in consistency driven by the simultaneous decreases of the rankings towards low levels in our sample.

From this setting, therefore, two predictions can be tested: Increase in consistency, more than consistency in level, should be positively correlated to growth (1); Policy components and increase in policy components are not necessarily good for growth, if policies are not improving in consistency (2).

Our model is based therefore upon the following intuition. Let's distinguish countries with low (high) level of consistency and low (high) positive change in consistency. Table 4 reports the rate of growth in such countries, the policies consistency and increase in policies consistency, and the seven policy scores one by one.

Table 4: Consistency, policy components and economic growth

	Bahrain	Israel	Libya	Malaysia	Ukraine	Belize
Growth rate	-3.05	2.62	3.62	3.11	3.90	-.59
Consistency	4.31	3.23	5.85	5.69	6.31	6.02
Δ Consistency	-4.92	7.55	8.11	-3.90	9.07	-4.62
Aid	1.26	.55	2.75	1.90	3.26	2.60
Migration	4.71	5.05	4.77	4.61	5.35	4.97
Trade	4.57	5.801	5.51	5.04	5.33	5.48
Investment	5.22	11.16936	8.46	5.17146	5.07	5.06
Technology	1.80	.84	4.49	4.59	4.14	4.16
Security	1.19	.85	3.50	1.82	3.82	3.60
Environment	1.86	.77	4.42	3.41	4.00	3.46

According to the preliminary evidence, economic performance seems to be higher in countries like Israel, Ukraine or Libya, that benefit from a higher increase in consistency, whatever the initial level of consistency, be it low (Bahrain) or high (Belize and Malaysia), and whatever the level of each policy considered separately. Of course, we do not control at this stage for the many other factors that matter for growth, which is the purpose of the following sections.

5 Model and Econometric methodology

We base our empirical specification on Roodman [2007], applying the usual analysis of economic growth in developing countries. This paper aims at demonstrating that what really matters is consistency improvement, whatever the level of each isolated policy. We estimate therefore three equations: in specification 3a, we replace the usual quantitative ODA term by the P's policy index. Each P's policy index is considered separately, in level and variation, in order to avoid collinearity issues. In specification 3b, we add the policy coherence index in level and variation. Specifiation 4

excludes the P's policy indices but includes the policy coherence in level and variation:

$$growth_{it} = \beta_0 + \lambda_i + \beta_1 X_{it} + \beta_2 P_{itN} + \beta_3 \Delta P_{itN} + v_{it} \tag{3a}$$

$$growth_{it} = \zeta + \lambda_i + \beta_1 X_{it} + \beta_2 consistency_{it} + \beta_3 P_{itN} + \beta_4 \Delta consistency_{it} + \beta_5 \Delta P_{itN} + v_{it} \tag{3b}$$

$$growth_{it} = \beta_0 + \lambda_i + \beta_1 X_{it} + \beta_2 consistency_{it} + \beta_3 \Delta consistency_{it} + z_{it} \tag{4}$$

where i designates the recipient countries, j the donor, t the year and N the aid component varying from 1 to 7 and X_{it} designates our control variables: initial GDP per capita (log), political instability, institutional quality, trade openness, inflation and budget surplus.

Economic growth designates the annual growth rate of per capita GDP, expressed in constant US dollars. The short-term variations are smoothed out using simple moving averages over 4 years. All variables are expressed in simple moving averages over 4 years. Initial GDP per capita is measured by the first year of each period considered (for an analogous method see for example Lessmann and Markwardt [2012]. Trade openness refers to the sum of exports and imports of goods and services (as a share of GDP). Inflation is proxied by the annual percentage change in consumer prices. Budget Surplus (as a share of GDP) revenue minus expense over GDP, refers to the soundness of government fiscal policies. Institutional quality represents the simple average of 5 institutional variables provided by the World Bank (World governance indicators): control of corruption, voice and accountability, rule of law, regulatory quality and government effectiveness. Higher values of our variable indicate better governance ratings. We also integrate political instability, using the sixth world governance indicator from the World Bank. This variable is rescaled such that higher values indicate greater instability (for a detailed description of all explanatory variables used in this article and their sources, see Appendix C). We provide descriptive statistics of the explanatory variables, by region, in Appendix B.

Results are provided in the subsequent sections 6 and 7. In section 6, table 5 provides OLS estimates including fixed effects. Section 7 reports IV estimates, for taking into account the endogeneity of CGD's policy components and the index of policy coherence. Our instruments are those commonly used in the literature (common language and geographical distance between the donor and the recipient) to which we have added donor's characteristics (tax rate, inflation, debt, agriculture's share and budget surplus). Economic health of donors is expected to have a direct impact on aid efforts, but not on growth in beneficiary countries. All IV estimates include country-fixed effects.

6 Main Results

From the estimates of equation 3a versus equations 3b and 4, we can conclude that only change in the policy coherence has a significant, positive, and robust impact on economic growth, but neither consistency level, nor policies themselves. As suggested by table 4 and according to our model's predictions, we can interpret the negative correlations between some policies level (or change) like aid, migration, and investment policies, and growth (but not trade, interestingly) : those policies do not have a positive impact on growth in recipient countries if they are not implemented in a coherent way. In terms of policy recommendation, improvement in consistency and reforms complementarity, must be the priority. Donors must be aware of the likely adverse impact of one isolated policy's improvement on growth, if other policies are not considered simultaneously, to achieve an overall consistent strategy.

As argued in Macedo and Martins [2008][9], consistency level is not necessarily linked to better economic performance, as high consistency can go in hand with low levels P's indices.

We find evidence that the quality of migration policy positively affects economic growth in developing countries, which echoes the flourishing literature about the positive externalities generated by migrants abroad (Fernández-Huertas Moraga and Rapoport [2011]). By contrast, policies towards developing countries in the area of environment, technology, and security are not associated with better economic performance.

We compute the increase in growth induced by a one standard deviation increase in consistency change. This calculus is based upon the estimates of equation 4 (column 1, Table 5) which fits our preferred specification. The standard deviation of the consistency change being equal to 3.68, we obtained an increase in growth of 13.5% (0.135 percentage point) for an average growth of 3.43: $13.5 = \frac{(3.68 \times 0.126)}{3.43}$ where 0.126 is the estimate of consistency change. The coefficient is stable, varying in a range between 0.052 and 0.126.

We also compute the growth increase in Bahrain would the change in donors policies consistency in this country be of the same order of magnitude than in Israel. We obtain a predicted growth rate of -0.1 to be compared with the effective growth rate of -3.05. For Malaysia (when compared with Libya), the predicted rate yields 6.27, it exceeds the effective growth rate by 3.16 percentage points.

All other variables have the expected signs. Well-governed democratic nations grow faster (Butkiewicz and Yanikkaya [2006]). Resources in open economies are more efficiently allocated. Growth is higher in countries that are relatively more open to international trade (as in Burn-

[9] Macedo and Martins [2008] have explained economic growth in transition countries by using 3 types of factors: initial conditions, macroeconomic stabilization and reforms. They found that reforms (in level) and reforms complementarity (in variation) generate economic growth, while reforms variation and reforms complementarity (in level) have a negative impact on economic growth. They explain that reforms (in level) provide long-run objectives and that reforms complementarity (in variation) describe guidance for the implementation of reforms.

side and Dollar [2000], Clemens et al. [2004], Butkiewicz and Yanikkaya [2005] or Neanidis and Varvarigos [2009]). High levels of inflation and political instability within a country have been found to negatively affect economic growth. The adverse effects of inflation are identified but frequently insignificant in most of our estimates. Furthermore, political instability is not found to affect economic growth in our sample. An improvement of fiscal revenues, a stringent control of public expenditures or a return to budgetary balance encourage economic growth (Butkiewicz and Yanikkaya [2005] or Minoiu and Reddy [2010] among others). As is standard in the literature, initial income allows us to capture convergence effects. The measure we use (initial GDP per capita) displays a negative impact, which is coherent with previous literature (e. g. Dalgaard et al. [2004], Rajan and Subramanian [2008]).

We do not find evidence of an effect of each isolated donors' policy on economic growth. For this reason, in the following section, we only rely on equations (3b) and (4).

Table 5: Effect of donors' policy on economic growth in developing countries, OLS Fixed Effects

VARIABLES	Effect on economic growth of:														
	Aid policy		Migration policy		Investment policy		Trade policy		Security policy		Technology policy		Environment policy		Consistency (only)
Equation	(3a)	(3b)	(3a)	(3b)	(3a)	(3b)	(3a)	(3b)	(3a)	(3b)	(3a)	(3b)	(3a)	(3b)	(4)
Initial GDP per cap (log)	-14.55***	-14.65***	-14.84***	-14.83***	-15.50***	-15.60***	-16.86***	-16.39***	-14.97***	-14.67***	-14.89***	-14.63***	-14.97***	-15.84***	-14.88***
	(1.133)	(1.104)	(1.098)	(1.094)	(1.371)	(1.351)	(1.438)	(1.431)	(1.115)	(1.119)	(1.077)	(1.102)	(1.410)	(1.581)	(1.066)
Recipient pol. instability	-0.528	-0.564	-0.939	-0.827	-0.726	-0.686	-0.726	-0.628	-0.496	-0.593	-0.561	-0.518	-0.470	-0.614	-0.616
	(0.753)	(0.734)	(0.764)	(0.758)	(0.735)	(0.728)	(0.734)	(0.731)	(0.742)	(0.744)	(0.734)	(0.741)	(0.734)	(0.741)	(0.733)
Recipient inst. quality	5.331***	4.972***	5.305***	5.468***	4.730***	4.833***	5.298***	5.401***	4.816***	5.315***	5.325***	5.075***	5.429***	5.140***	5.340***
	(1.543)	(1.506)	(1.517)	(1.499)	(1.533)	(1.510)	(1.508)	(1.490)	(1.558)	(1.559)	(1.523)	(1.540)	(1.519)	(1.526)	(1.499)
Recipient Trade/GDP	0.026	0.031**	0.022	0.025	0.017	0.021	0.023	0.026*	0.028*	0.031*	0.025*	0.031*	0.029*	0.031**	0.025
	(0.016)	(0.016)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.016)	(0.016)	(0.016)	(0.016)	(0.015)	(0.015)	(0.015)
Recipient inflation	-0.044	-0.052	-0.059	-0.057	-0.046	-0.044	-0.035	-0.033	-0.053	-0.046	-0.049	-0.053	-0.044	-0.053	-0.040
	(0.044)	(0.043)	(0.043)	(0.043)	(0.043)	(0.042)	(0.043)	(0.042)	(0.043)	(0.043)	(0.043)	(0.043)	(0.043)	(0.043)	(0.043)
Recipient budget surplus	0.246***	0.204**	0.213***	0.209***	0.235***	0.230***	0.268***	0.257***	0.255***	0.221***	0.228***	0.222***	0.231***	0.220***	0.228***
	(0.083)	(0.082)	(0.077)	(0.076)	(0.077)	(0.075)	(0.076)	(0.075)	(0.083)	(0.083)	(0.082)	(0.082)	(0.082)	(0.082)	(0.075)
Consistency		-0.763		-0.095		-0.057		0.054		-0.237		0.663		-0.359	-0.0900
		(0.876)		(0.665)		(0.668)		(0.661)		(0.820)		(1.018)		(0.783)	(0.663)
ΔConsistency		0.126***		0.052***		0.056***		0.053***		0.088**		0.066		0.076	0.055***
		(0.034)		(0.020)		(0.020)		(0.020)		(0.038)		(0.072)		(0.052)	(0.020)
Paid	-0.040	0.499													
	(0.284)	(0.384)													
ΔPaid	0.011	-0.023*													
	(0.008)	(0.0122)													
Pmigration			1.025	0.818											
			(0.693)	(0.692)											
ΔPmigration			-0.168**	-0.156**											
			(0.077)	(0.076)											
Ptrade					-0.362	-0.313									
					(0.300)	(0.300)									
ΔPtrade					0.076**	0.076**									
					(0.033)	(0.032)									
Pinvestment							0.443	0.237							
							(0.543)	(0.543)							
ΔPinvestment							-0.158**	-0.151**							
							(0.067)	(0.066)							
Psecurity									-0.191	0.200					
									(0.245)	(0.338)					
ΔPsecurity									0.018**	-0.007					
									(0.008)	(0.014)					
Ptechnology											-0.255	-0.546			
											(0.443)	(0.673)			
ΔPtechnology											0.034***	0.006			
											(0.011)	(0.036)			
Penvironment													0.263	0.365	
													(0.299)	(0.348)	
ΔPenvironment													0.023***	-0.004	
													(0.008)	(0.019)	
Observations	290	290	299	299	299	299	299	299	290	290	290	290	290	290	299
R-squared	0.633	0.656	0.641	0.653	0.642	0.656	0.643	0.655	0.639	0.649	0.647	0.649	0.645	0.650	0.646
Number of countries	81	81	83	83	83	83	83	83	81	81	81	81	81	81	83

Standard errors in parentheses,*** p<0.01, ** p<0.05, * p<0.1. Constant term is included but not reported.

7 Robustness checks

While P's indices and consistency cause higher growth, the reverse causality cannot be excluded although limited by the use of indices that are not bilateral[10]. For instance, the poor economic performance in a developing country raises the demand for both more policies and for more consistency in donors' policies. To address this endogeneity issue, we select a set of instruments, which are inspired by the recent literature on aid allocation.

This literature identifies two main categories of instruments for our growth equation: donors self interest and donors' economic soundness.[11]

- Donors' self interest has been emphasized in several papers. They include geopolitical and commercial interests[12]. For what regards commercial interests, exports to the recipient countries has not been included as this measure is clearly endogenous. Turning to geopolitical interests, the literature suggests several instruments: historical ties, geographic and cultural proximity from one hand and geostrategic alliances from the other hand:
  - First, historical ties (mainly common colonial past) between recipient countries and donors are now recognized as an important determinant of aid allocation. Former colonial links is our first instrument.[13]
  - Second, geographic distance and cultural proximity (common language) can also determine aid allocation (Tavares [2003]; Chauvet and Guillaumont [2009]). Dreher et al. [2011] also estimate that developing countries tend to receive more aid from both old and new donor groups when they are geographically closer. We include a dummy equal to one if the donor and the recipient share a common language. We include as well the geographic distance between the capital cities of the donor and recipient countries. Those variables constitute our second set of instruments.
  - Third, geostrategic alliances are likely to induce more aid from political allies or international institutions (Alesina and Dollar [2000], Dreher et al. [2009], Kilby [2009]). Hoeffler and Outram [2011] include UN voting allegiance and conclude that recipient countries voting in line with the United States and the United Kingdom tend to receive more aid than other developing countries. They also indicate that "it is unclear whether aid rewards voting allegiance or vice versa, leading some to question its validity as an

[10] Our strategy is to determine the overall quality of donors' policies toward each developing country. For that purpose, we have identified a "weighted" donor for each developing country (see Section 3). Our variables are therefore more multilateral than bilateral, which allows us to restrict the potential endogeneity bias.

[11] Two of the three major motives underlying aid (recipients needs and merits) can not be used in aid effectiveness literature since they are not exogenous instruments.

[12] Berthélémy [2006] provides an interesting overview of previous findings in aid allocation literature. He concludes that commercial interests play a major role in explaining aid allocation. He also estimates that trade interests are more important than geopolitical alliances regarding the quantitative impact of both variables.

[13] One must be aware that those instruments are questionable: colonial legacy may have a direct effect on economic growth by explaining the initial levels of technological advances (Price [2003]) or by determining investment, education of the degree of ethnic fractionalization (Bertocchi and Canova [2002])

explanatory variable (Berthélémy [2006])". The UN voting allegiance constitutes our third instrument.

Given the multilateral nature of endogenous variables, we follow the same procedure described in section 3 to transform the instruments according to the following formula:

$$\hat{A}_{Nit} = \sum_{j=1}^{22} \alpha_{ijt} X_{ijt}$$

where $\hat{A}_{Nit}$ designates our endogenous variables, α_{ijt} is the share of aid received by a developing country from each donor country included in our sample, X_{ijt} is the set of exogenous instruments we use:

$$X_{ijt} = \begin{cases} \text{1if i and j share a common language and 0 otherwise} \\ \text{geographic distance between the capital cities of i and j} \\ \text{1if country i votes in line with major donor j} \\ \text{1if country i was a former colony of France, UK, Portugal, Spain or Belgium} \end{cases}$$

- We consider also donors' economic soundness. Faced with debt concerns, fiscal unbalances or budget deficits, donors may consider aid as a sacrifice and they may react by tightening public expenditure, starting with aid flows[14]. Our strategy is inspired by De Ree and Nillesen [2009], who consider the effect of foreign aid on the risk of civil conflict. In their study, they employ GDP levels of donors as an instrument for aid. We replace GDP levels by variables, which describe the donors economic bad or good shape, and which are listed below.

  This strategy is based upon the assumption that donors' economic health has no direct link with economic growth in recipient countries, which can be debated: 1/ donors in bad shape are also the main economic partners of beneficiary countries ; 2/ "aid fatigue" may be due to the unwillingness of giving counterproductive aid, if the government considers that aid is not effective enough, e. g. in promoting economic growth or development.

  As previously, we have to weight the instruments according to the following formula:

$$\hat{A}_{Nit} = \sum_{j=1}^{22} \alpha_{ijt} X_{ijt}$$

  where X_{jt} designates the donor tax burden (measured by the level of the tax rate), the donor debt burden, inflationary pressures in donor countries, the share of agriculture in donor economy, the budget surplus in the donor.

[14] "Aid fatigue" may also be due to the unwillingness of giving counterproductive aid (if the government considers that aid is not effective enough, e. g. in promoting economic growth or development) as reported by Tingley [2010]. The main result consists in saying that the ideological orientations of donors (measured by governments priorities and by influences of political parties, i.e. liberal vs conservative orientations) may explain aid behaviors. Conservative parties are more likely to give less aid, especially in poorest countries. He also integrates economic determinants of aid flows (the trade position and economic health of donors). Lahiri and Raimondos-Møller [2004] also find that aid fatigue is a major determinant of aid allocation.

The total number of instruments has to be reasonable, and we have to choose amongst several possible combinations. We have retained the sets of instruments that report the highest values statistical tests (Sargan and underidentification tests) and we present in table 7 the estimates of the variable of interest (changes in consistency scores), for parsimony reason [15]. They are based on the following combination of instruments:

- Seven variables including two donors' self interest (geographic and cultural proximity) and five variables for donors' economic soundness.[16] Table 6 reports the whole results only for this instrumentation strategy (others being available upon request).

- Twelve variables for colonial ties and UN voting allegiance. Colonial ties are measured through a dummy set equal to one if the country was colonized by one of the following five largest European colonizers (France, Belgium, Spain, Portugal and United Kingdom). For UN voting allegiance, we make use of voting coincidence between recipient countries and 7 major donors (United States, United Kingdom, France, Japan, Italy, Germany, Canada). The last combination is the addition of the first two: donors' self interests (colonial legacy, geostrategic alliances, geographic and cultural proximity) augmented with donor's economic soundness, which makes a total of 19 instruments.

Our IV results confirm the positive impact of changes in policy coherence on economic growth. In table 6, positive changes in consistency scores lead to higher economic growth rates in recipient countries, while other aid policy coefficients, be the corresponding variable in level or change, loose their significance. All control variables have the expected signs, as in the previous section. Our results are robust to the inclusion of time fixed effects.[17] We also correct standard errors for recipient-clustered observations and the results still hold (see Table 13, Appendix F). Table 7 provides a summary of the different instrumentation strategies. It confirms that positive changes in donors' policy coherence lead to higher growth in beneficiary countries.

[15] The results are available upon request.

[16] We do not include the seven variables in all estimates as we seek to minimize the number of instrumental variables.

[17] The first stage regressions are available in Appendix D. We also provide IV results using country and time fixed effects in order to control for some potential time trend. The results are available in Appendix E. Our results remain robust.

Table 6: Effect of donors' policy on economic growth in recipient countries

	IV, Moving averages, 4 years, Country Fixed Effect							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Effect on economic growth							
	Aid policy	Migration policy	Investment policy	Trade policy	Security policy	Technology policy	Environment policy	Consistency (only)
Equation	(3b)	(3b)	(3b)	(3b)	(3b)	(3b)	(3b)	(4)
Initial GDP per cap. (log)	-14.46***	-11.39***	-19.07***	-16.26***	-15.08***	-13.15***	-19.57***	-14.03***
	(1.372)	(3.773)	(3.243)	(2.725)	(1.600)	(1.626)	(4.130)	(1.582)
Recipient pol. instability	-0.637	-2.046	-0.415	-0.198	-0.487	-0.490	-0.915	-0.0108
	(0.833)	(2.627)	(0.944)	(1.075)	(1.069)	(0.881)	(0.928)	(1.090)
Recipient inst. quality	5.226***	5.171*	6.504***	5.785**	4.604**	4.854**	4.190**	6.390***
	(1.909)	(2.892)	(1.845)	(2.592)	(2.279)	(1.893)	(2.089)	(2.203)
Recipient Trade/GDP	0.0572**	0.0645*	0.0514**	0.0568**	0.0804***	0.0766***	0.0700***	0.0559**
	(0.0239)	(0.0339)	(0.0205)	(0.0275)	(0.0265)	(0.0270)	(0.0234)	(0.0244)
Recipient inflation	-0.0625	-0.00562	-0.0464	-0.0399	-0.0725	-0.0618	-0.111*	-0.0344
	(0.0481)	(0.100)	(0.0534)	(0.0610)	(0.0640)	(0.0528)	(0.0630)	(0.0618)
Recipient budget surplus	0.119	0.0468	0.214**	0.202*	0.138	0.132	0.0899	0.161
	(0.107)	(0.183)	(0.0990)	(0.111)	(0.122)	(0.1000)	(0.110)	(0.111)
Consistency	-0.247	1.065	1.929	1.303	0.673	2.022	0.706	1.028
	(2.949)	(1.685)	(1.317)	(1.365)	(2.388)	(3.295)	(1.448)	(1.395)
ΔConsistency	0.410***	0.477*	0.333**	0.436***	0.451***	0.636*	0.609**	0.457***
	(0.154)	(0.245)	(0.133)	(0.142)	(0.144)	(0.337)	(0.295)	(0.134)
Paid	0.432							
	(1.654)							
ΔPaid	-0.0248							
	(0.0651)							
Pmigration		6.129						
		(6.994)						
ΔPmigration		-0.0459						
		(0.425)						
Pinvestment			2.554					
			(1.763)					
ΔPinvestment			-0.143					
			(0.130)					
Ptrade				0.650				
				(1.094)				
ΔPtrade				-0.00619				
				(0.210)				
Psecurity					0.342			
					(0.956)			
ΔPsecurity					0.0192			
					(0.0483)			
Ptechnology						0.158		
						(2.564)		
ΔPtechnology						-0.151		
						(0.166)		
Penvironment							1.117	
							(1.115)	
ΔPenvironment							-0.102	
							(0.0955)	
Observations	290	299	299	299	290	290	290	299
R-squared	0.881	0.733	0.855	0.809	0.816	0.876	0.862	0.834
Underidentification test (p value)	0.0603	0.4832	0.0517	0.0784	0.0061	0.0034	0.0828	0.0362
Sargan Statistic (p value)	0.1420	0.7381	0.8672	0.8181	0.7269	0.2162	0.4442	0.7596
Endogeneity test (p value)	0.01111	0.0000	0.0000	0.0000	0.0000	0.0148	0.0000	0.0000

Standard errors in parentheses,*** p<0.01, ** p<0.05, * p<0.1. Constant term, country fixed effects are included but not reported. They are available upon request. All instruments (distance donor-recipient, common language, donor tax rate, donor debt, donor inflation, donor budget surplus, donor agriculture share) are weighted by the share of aid flows provided by each donor in total aid received by each developing country.

Table 7: Alternative instrumentation strategies: effect of changes in donors' policy coherence on economic growth

Effect on economic growth: IV, Moving averages, 4 years, Country Fixed Effect								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Effect on economic growth							
	Aid policy	Migration policy	Investment policy	Trade policy	Security policy	Technology policy	Environment policy	Consistency (only)
Equation	(3b)	(3b)	(3b)	(3b)	(3b)	(3b)	(3b)	(4)
Instrumental variables: donors' interest (common language, geographical distance) and donors' economic soundness								
ΔConsistency	0.410***	0.477*	0.333**	0.436***	0.451***	0.636*	0.609**	0.457***
	(0.154)	(0.245)	(0.133)	(0.142)	(0.144)	(0.337)	(0.295)	(0.134)
Instrumental variables: donors' interest (colonial legacy, UN voting allegiance)								
ΔConsistency	0.575**	0.494**	0.257	0.373**	0.436**	0.236	0.441**	0.397**
	(0.257)	(0.237)	(0.227)	(0.183)	(0.177)	(0.289)	(0.178)	(0.186)
Instrumental variables: all donors' interest (colonial legacy, UN voting allegiance, common language, geographical distance) and donors' economic soundness								
ΔConsistency	0.456***	0.222***	0.256***	0.251***	0.328***	0.246	0.461***	0.273***
	(0.105)	(0.0644)	(0.0668)	(0.0682)	(0.0832)	(0.163)	(0.140)	(0.0637)

Standard errors in parentheses,*** p<0.01, ** p<0.05, * p<0.1. Constant term, country fixed effects and all other explanatory variables are included but not reported. They are available upon request. All instruments (distance donor-recipient, common language, donor tax rate, donor debt, donor inflation, donor budget surplus, donor agriculture share) are weighted by the share of aid flows provided by each donor in total aid received by each developing country.

8 Conclusion

Aid effectiveness has been widely addressed in the literature. Political and economic conditions in recipient countries, under which aid is more effective, have been recognized. Bilateral donors and international organizations have already begun to allocate more aid towards countries who have implemented such appropriate policies. More recently, some of donors and researchers have acknowledged that aid effectiveness should be documented in relation to the donors characteristics and policies.

The DAC donors have already highlighted that policy coherence is a core concern to achieve the objective of aid provided by OECD countries. To our knowledge, the quantitative contribution of policy coherence to economic growth in developing countries has not been documented in the literature to date.

This paper quantifies the economic impact of aid, which is received from the main 22 OECD donors by developing countries. The main contribution is threefold: first, we take advantage of the CGD's aid indices, and construct a panel dataset allowing to describe the average quality of aid policies implemented in beneficiary countries over time. Those aid policies cover a wide range of complementary dimensions of aid: trade, investment, migration, security, environment, technology, aid.

We do not only investigate the relevance of donors' domestic policies in shaping bilateral aid. Our main emphasis is on the key role played by the policy consistency towards poor countries. We

demonstrate that what matters is not the policies themselves, neither in level nor in change, it is not the consistency itself, but its improvement. In terms of policy recommendation, this implies that consistency is the most relevant. One isolated aid policy, if implemented alone, can produce distortions and be harmful for growth in developing countries. Neglecting the interdependence of domestic policies in donor countries can undermine aid effectiveness. A consistent package of policies is more likely to produce growth dividends.

Finally, we generalize the result in Berthélémy et al. [2009], who have shown that aid and migration are not independent from each other: a donor can provide aid and simultaneously tighten his migration policy. This finding can be generalized to other aid policy dimensions: trade, investment, policies, and it must be incorporated in the way aid effectiveness is assessed. The effect of aid can be dampened of enhanced, depending on whether aid is a substitute or a complement for other policies. In other words, donors should be consistent to be efficient.

Further research should integrate new emerging donors (e.g. China or Brazil). Understanding new challenges faced by the donors and the new evidence of aid allocation is key to ensuring aid effectiveness and supporting economic development. Dreher et al. [2011] highlight that aid from new donors is less poverty oriented (and does not meet recipient needs). We should investigate the effects of these new donors on policy consistency towards developing countries and their consequences in terms of economic development.

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Appendices

A List of countries used in the analysis:

Albania, Algeria, Argentina, Armenia, Azerbaijan, Bahrain, Bangladesh, Barbados, Belarus, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Brazil, Cambodia, Cape Verde, Central African Republic, China, Colombia, Congo. Dem. Rep., Congo. Rep., Costa Rica, Cote d'Ivoire, Croatia, Cyprus, Dominican Republic, Egypt. Arab Rep., El Salvador, Ethiopia, Fiji, Georgia, Ghana, Guatemala, Honduras, India, Indonesia, Iran. Islamic Rep., Israel, Jamaica, Jordan, Kazakhstan, Kenya, Kyrgyz Republic, Lao PDR, Lesotho, Liberia, Macedonia. FYR, Madagascar, Malaysia, Maldives, Mali, Mauritius, Moldova, Mongolia, Morocco, Namibia, Nepal, Nicaragua, Nigeria, Pakistan, Paraguay, Peru, Philippines, Serbia, Seychelles, Sierra Leone, Slovenia, South Africa, Sri Lanka, St. Kitts and Nevis, St. Vincent and the Grenadines, Swaziland, Tajikistan, Thailand, Togo, Trinidad and Tobago, Tunisia, Turkey, Uganda, Ukraine, Zambia

B Descriptive Statistics

Recipient Initial GDP per capita in log (average) by region

Region	Obs	Mean	Std. Dev.	Min	Max
Sub Saharan Africa	384	6.236678	.0559135	6.142724	6.314064
East Asia and Pacific	248	7.039803	.0777161	6.917009	7.149668
Latin America	208	8.262338	.0567724	8.172635	8.333525
Central America	64	7.828003	.0651843	7.723708	7.898681
Europe and Central Asia	160	7.321912	.1288239	7.099998	7.463863
Middle East and North Africa	144	8.048806	.0679106	7.9312	8.144469

Recipient Inflation rate by region (average)

Region	Obs	Mean	Std. Dev.	Min	Max
Sub Saharan Africa	384	10.91748	4.319637	5.746211	18.52082
East Asia and Pacific	248	6.965794	2.657354	3.865644	13.49043
Latin America	208	6.763939	1.898982	4.079096	10.24854
Central America	64	7.159426	2.952595	2.838636	11.95846
Europe and Central Asia	160	7.171097	2.302825	4.234442	12.52323
Middle East and North Africa	144	6.187385	2.147949	4.168356	11.04634

Recipient Budget Surplus by region (average)

Region	Obs	Mean	Std. Dev.	Min	Max
Sub Saharan Africa	384	-.0750813	1.346248	-1.170565	3.382644
East Asia and Pacific	248	-2.571096	.7762969	-3.903062	-1.395189
Latin America	208	-1.697664	1.237116	-3.448204	.1462165
Central America	64	-1.795162	1.010659	-3.671512	-.2866457
Europe and Central Asia	160	-1.328523	1.320198	-3.815784	-.2861046
Middle East and North Africa	144	-.8959775	1.560864	-3.529697	.3391434

Recipient Political Instability by region (average)

Region	Obs	Mean	Std. Dev.	Min	Max
Sub Saharan Africa	384	4.035513	.0232904	3.991032	4.055322
East Asia and Pacific	248	3.703297	.0453996	3.61732	3.757068
Latin America	208	3.505575	.0328582	3.454835	3.561624
Central America	64	3.62451	.0311264	3.576217	3.674714
Europe and Central Asia	160	3.806439	.1307932	3.614928	3.973
Middle East and North Africa	144	4.165565	.0623152	4.069672	4.272851

Recipient Institutional Quality by region (average)

Region	Obs	Mean	Std. Dev.	Min	Max
Sub Saharan Africa	384	-.6983797	.0151037	-.7298807	-.6776295
East Asia and Pacific	248	-.4981833	.0223778	-.5298268	-.458331
Latin America	208	.0811649	.0425919	.0077944	.1182627
Central America	64	-.225676	.0207368	-.2460509	-.1865626
Europe and Central Asia	160	-.4949382	.051548	-.5811081	-.4274243
Middle East and North Africa	144	-.3816644	.0298006	-.4276959	-.3219688

Recipient Trade Openness by region (average)

Region	Obs	Mean	Std. Dev.	Min	Max
Sub Saharan Africa	384	81.85094	3.728418	77.65225	89.00784
East Asia and Pacific	248	91.72275	5.147024	83.34168	97.61929
Latin America	208	74.53417	3.614399	69.02074	80.25102
Central America	64	96.57498	6.695054	84.25074	104.7035
Europe and Central Asia	160	95.62956	4.175244	87.11707	101.6722
Middle East and North Africa	144	87.95484	7.115997	79.58994	98.817

C Description of explanatory variables

The next tables describe all explanatory variables used in the analysis and their sources.

Table 8: Description of recipient variables and sources

Description of variables		
Variables	Description	Sources
Variables of recipient countries		
Initial GDP per capita (in ln)	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant U.S. dollars.	World Development Indicator (hereafter called WDI) World Bank
Per capita GDP growth	Annual % growth rate of GDP per capita based on GDP per capita in constant U.S. dollars.	Authors own calculations
Trade (% GDP)	Sum of exports and imports of goods and services measured as a share of Gross Domestic Product	WDI, World Bank
Inflation (consumer prices)	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.	WDI, World Bank
Budget Surplus (%GDP)	Cash surplus or deficit is revenue (including grants) minus expense, minus net acquisition of nonfinancial assets. In the 1986 GFS manual nonfinancial assets were included under revenue and expenditure in gross terms. This cash surplus or deficit is closest to the earlier overall budget balance (still missing is lending minus repayments, which are now a financing item under net acquisition of financial assets).	WDI, World Bank
Institutional quality	Control of corruption, rule of law, government effectiveness, Voice and Accountability, regulatory quality (average). Higher values indicate better governance ratings.	World Governance Indicator (WGI), World Bank
Political instability	It measures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism. The index is rescaled so that higher values indicate greater instability. We use the following formula: $Polinst = \|PolStab - 3,5\|$.	WGI, World Bank

Table 9: Description of bilateral and donors variables and sources

Description of variables		
Variables	Description	Sources
Bilateral variables		
Trade	Imports of developed countries from developing countries.	OECD bilateral trade Harmonized system 1988
Migration	Stocks of migrants in developed countries from each developing countries in 2000 (born in developing countries considered)	Global Migrant Origin Database
FDI	FDI stocks in 2004	FDI Database CEPII GTAP 6.2 database for stocks
Distance	Lagitudes and Longitudes from the major cities	CEPII Gravity Dataset
Common Language	Common Official Language	CEPII Gravity Dataset
Bilateral aid	Current US$, Millions, Gross Disbursements	DAC OECD
Variables of donor countries		
Debt donors	Total Central Government Debt, % GDP	OECD, Statistics
Inflation	Consumer prices, % change from previous period	OECD, Statistics Consumer prices, MEI
Budget Surplus (% GDP)	Cash surplus or deficit is revenue (including grants) minus expense, minus net acquisition of non financial assets.	WDI, World Bank
UNGA Voting coincidence	Country's voting behavior with respect to the G7 countries at the UNGA (United Nation General Assembly). All votes are included (definition according to Thacker)	Dreher and Sturm [2012]
Common colonial past	5 dummies equal to one if the developing countries have had a colonial link with France, United Kingdom, Belgium, Spain and Portugal	La Porta et al. [1999]

D Instrumental variables: first stage regressions

Table 10: Effect of donors' policies on economic growth in recipient countries, First Stages

IV, Moving averages, 4 years, Country Fixed Effect								
VARIABLES	(1) Paid	(2) ΔPaid	(3) Pmigration	(4) ΔPmigration	(5) Pinvestment	(6) ΔPinvestment	(7) Ptrade	(8) ΔPtrade
Initial GDP per cap (log)	-0.429*	-22.38**	-0.581***	-2.201	1.026***	-2.828***	1.415***	14.69***
	(0.257)	(10.67)	(0.160)	(1.342)	(0.151)	(1.050)	(0.274)	(3.313)
Recipient pol. instability	-0.305*	-2.672	0.357***	0.926	0.0850	-0.488	0.327**	1.421
	(0.158)	(6.550)	(0.0904)	(0.757)	(0.0852)	(0.592)	(0.154)	(1.869)
Recipient inst. quality	-0.171	-11.59	0.228	2.771*	-0.163	-1.994	0.738**	8.013**
	(0.327)	(13.58)	(0.186)	(1.553)	(0.175)	(1.215)	(0.317)	(3.835)
Recipient Trade/GDP	-0.00546	-0.284**	-0.00203	-0.000351	-0.00132	-0.00189	0.000199	0.0670
	(0.00344)	(0.143)	(0.00196)	(0.0164)	(0.00185)	(0.0129)	(0.00335)	(0.0406)
Recipient inflation	0.00665	-0.148	-0.00623	-0.0800*	0.000125	-0.0246	0.00381	0.0147
	(0.00934)	(0.388)	(0.00532)	(0.0445)	(0.00501)	(0.0348)	(0.00908)	(0.110)
Recipient budget surplus	0.000112	-0.493	0.0228**	0.0215	0.000954	0.0557	-0.0230	-0.211
	(0.0182)	(0.757)	(0.00959)	(0.0802)	(0.00903)	(0.0628)	(0.0164)	(0.198)
Distance donor-recipient by aid	-0.148***	-6.410***	0.00451	-0.271	0.0298	-0.473**	0.0225	0.0918
	(0.0524)	(2.174)	(0.0298)	(0.249)	(0.0280)	(0.195)	(0.0508)	(0.615)
Common language by aid	-0.496	-36.18*	-0.283	2.108	-0.592**	3.248	-0.712	3.231
	(0.518)	(21.49)	(0.302)	(2.525)	(0.284)	(1.976)	(0.515)	(6.235)
Donor tax rate by aid	0.0591***	0.677	0.00368	0.0232	0.00440	0.297***	0.0102	0.0680
	(0.0101)	(0.418)	(0.00661)	(0.0553)	(0.00622)	(0.0433)	(0.0113)	(0.137)
Donor debt by aid	0.00230	-0.0486	0.00115	-1.98e-05	-0.000748	0.105***	-0.00423	-0.00967
	(0.00268)	(0.111)	(0.00154)	(0.0129)	(0.00145)	(0.0101)	(0.00263)	(0.0318)
Donor inflation by aid	-0.182***	-3.143	-0.0245	-1.867***	0.0398	-1.072***	0.0761	1.478
	(0.0673)	(2.794)	(0.0544)	(0.455)	(0.0512)	(0.356)	(0.0929)	(1.124)
Donor budget surplus by aid			-0.0141	0.205	-0.0363**	0.838***	-0.271***	-1.193***
			(0.0168)	(0.141)	(0.0159)	(0.110)	(0.0287)	(0.348)
Donor agriculture's share by aid	1.460***	-9.234	-0.00327	3.394***	-0.721***	-3.860***	-0.554***	-7.893***
	(0.207)	(8.604)	(0.123)	(1.028)	(0.116)	(0.804)	(0.210)	(2.538)
Observations	290	290	299	299	299	299	299	299
R-squared	0.974	0.543	0.975	0.742	0.992	0.879	0.933	0.698
F test of excl. instr.	1.76	1.76	1.54	1.54	1.54	1.54	1.54	1.54
F test p value	0.1086	0.1086	0.1565	0.1565	0.1565	0.1565	0.1565	0.1565

Standard errors in parentheses,*** p<0.01, ** p<0.05, * p<0.1. Constant term, country fixed effects are included but not reported. They are available upon request. All instruments (distance donor-recipient, common language, donor tax rate, donor debt, donor inflation, donor budget surplus, donor agriculture share) are weighted by the share of aid flows provided by each donor in total aid received by each developing country.

Table 11: Effect of donors' policies on economic growth in recipient countries, First Stages

IV, Moving averages, 4 years, Country Fixed Effect								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Psecurity	ΔPsecurity	Ptechnology	ΔPtechnology	Penvironment	ΔPenvironment	Consistency	ΔConsistency
Initial GDP per cap. (log)	0.148	-18.93	0.212	13.36*	2.265***	-23.59**	0.214**	-2.433
	(0.244)	(11.58)	(0.158)	(7.565)	(0.291)	(11.25)	(0.103)	(4.236)
Recipient pol. instability	-0.281**	-2.212	-0.0978	0.0699	0.113	-0.945	-0.103*	0.233
	(0.137)	(6.505)	(0.0993)	(4.748)	(0.164)	(6.318)	(0.0577)	(2.380)
Recipient inst. quality	0.357	29.18**	-0.538**	-4.819	0.261	-7.758	-0.163	0.321
	(0.280)	(13.31)	(0.207)	(9.917)	(0.335)	(12.93)	(0.118)	(4.870)
Recipient Trade/GDP	-0.00420	-0.376***	-0.00439**	-0.0816	-0.00775**	-0.261*	-0.00167	-0.101*
	(0.00296)	(0.141)	(0.00217)	(0.104)	(0.00355)	(0.137)	(0.00125)	(0.0516)
Recipient inflation	0.00817	0.471	-0.0130**	0.0347	0.0123	-0.358	0.00244	0.00105
	(0.00801)	(0.381)	(0.00584)	(0.279)	(0.00958)	(0.370)	(0.00338)	(0.139)
Recipient budget surplus	-0.0140	0.109	0.00909	0.256	0.0331*	0.467	0.00370	0.243
	(0.0160)	(0.760)	(0.0115)	(0.552)	(0.0191)	(0.738)	(0.00674)	(0.278)
Distance donor-recipient by aid	0.0660	-1.179	0.149***	0.327	-0.0106	0.846	0.0524***	0.156
	(0.0449)	(2.132)	(0.0330)	(1.581)	(0.0537)	(2.071)	(0.0189)	(0.780)
Common language by aid	0.118	8.778	-1.032***	-5.319	-1.931***	-29.91	-0.455**	-8.376
	(0.452)	(21.50)	(0.328)	(15.67)	(0.541)	(20.89)	(0.191)	(7.868)
Donor tax rate by aid	0.0756***	-0.633	0.0208***	-0.461	-0.0249**	-1.041**	0.0205***	-0.305*
	(0.00993)	(0.472)	(0.00638)	(0.305)	(0.0119)	(0.459)	(0.00419)	(0.173)
Donor debt by aid	-0.00410*	-0.161	0.00768***	-0.0735	-0.00610**	-0.150	0.00299***	-0.0777*
	(0.00231)	(0.110)	(0.00168)	(0.0802)	(0.00276)	(0.107)	(0.000974)	(0.0402)
Donor inflation by aid	-0.171**	5.418	0.136***	5.804***	0.476***	11.49***	0.0585*	3.669**
	(0.0816)	(3.877)	(0.0423)	(2.022)	(0.0976)	(3.765)	(0.0344)	(1.418)
Donor budget surplus by aid	-0.153***	-6.172***			-0.195***	-2.147*	-0.0128	-0.680
	(0.0255)	(1.213)			(0.0305)	(1.178)	(0.0108)	(0.444)
Donor agriculture's share by aid	1.375***	-3.366			0.555**	-2.156	0.766***	-3.401
	(0.184)	(8.760)			(0.220)	(8.508)	(0.0777)	(3.205)
Observations	290	290	290	290	290	290	290	290
R-squared	0.974	0.591	0.976	0.472	0.960	0.394	0.987	0.452
F test of excl. instr.	1.86	1.86	1.64	1.64	1.86	1.86	1.86	1.86
F test p value	0.0787	0.0787	0.1517	0.1517	0.0787	0.0787	0.0787	0.0787

Standard errors in parentheses,*** p<0.01, ** p<0.05, * p<0.1. Constant term, country fixed effects are included but not reported. They are available upon request. All instruments (distance donor-recipient, common language, donor tax rate, donor debt, donor inflation, donor budget surplus, donor agriculture share) are weighted by the share of aid flows provided by each donor in total aid received by each developing country.

E IV estimates including country and time fixed effects

Table 12: Effect of donors' policy on economic growth including time and country fixed effects

IV, Moving averages, 4 years, Country and Time Fixed Effect								
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Effect on economic growth							
	Aid policy	Migration policy	Investment policy	Trade policy	Security policy	Technology policy	Environment policy	Consistency (only)
Equation	(3b)	(3b)	(3b)	(3b)	(3b)	(3b)	(3b)	(4)
Initial GDP per cap. (log)	-15.96***	-12.02***	-15.90***	-15.09***	-14.45***	-16.11***	-12.68***	-16.29***
	(2.203)	(4.213)	(2.119)	(2.735)	(2.348)	(1.815)	(2.720)	(1.840)
Recipient pol. instability	-0.293	-1.405	-0.359	-0.206	-0.514	-0.641	-0.337	-0.219
	(0.880)	(1.331)	(0.941)	(0.969)	(1.006)	(0.816)	(1.061)	(0.837)
Recipient inst. quality	4.369**	8.318**	5.742**	7.249**	4.784**	5.019***	6.449***	6.017***
	(2.017)	(3.867)	(2.290)	(3.231)	(2.284)	(1.711)	(2.277)	(1.720)
Recipient Trade/GDP	0.0707***	0.0542***	0.0502**	0.0497**	0.0776***	0.0550***	0.0559**	0.0448**
	(0.0235)	(0.0210)	(0.0210)	(0.0216)	(0.0286)	(0.0191)	(0.0277)	(0.0183)
Recipient inflation	-0.0650	-0.0617	-0.0380	-0.0240	-0.0569	-0.0664	-0.0321	-0.0377
	(0.0523)	(0.0648)	(0.0535)	(0.0606)	(0.0625)	(0.0444)	(0.0678)	(0.0502)
Recipient budget surplus	0.1000	0.143	0.227**	0.221**	0.159	0.208**	0.238*	0.228***
	(0.117)	(0.111)	(0.0917)	(0.0972)	(0.114)	(0.0831)	(0.131)	(0.0876)
Consistency	-0.609	0.534	0.616	0.880	-0.325	-0.0571	2.982	0.636
	(2.240)	(1.216)	(1.118)	(1.304)	(1.998)	(3.769)	(1.882)	(1.034)
ΔConsistency	0.565***	0.282***	0.333***	0.347***	0.421***	0.462	0.331	0.315***
	(0.200)	(0.0942)	(0.0879)	(0.111)	(0.136)	(0.328)	(0.353)	(0.0814)
Paid	2.160							
	(1.632)							
ΔPaid	-0.0937							
	(0.0751)							
Pmigration		6.129						
		(6.994)						
ΔPmigration		-1.039						
		(1.074)						
Ptrade			1.010					
			(1.153)					
ΔPtrade			-0.0370					
			(0.204)					
Pinvestment				1.631				
				(5.168)				
ΔPinvestment				0.442				
				(0.675)				
Psecurity					0.650			
					(0.840)			
ΔPsecurity					0.0101			
					(0.0505)			
Ptechnology						1.383		
						(2.832)		
ΔPtechnology						-0.139		
						(0.205)		
Penvironment							-2.433*	
							(1.248)	
ΔPenvironment							0.0712	
							(0.117)	
Observations	290	299	299	299	290	290	290	299
R-squared	0.871	0.854	0.864	0.855	0.841	0.918	0.817	0.876
Underidentification test (p value)	0.0198	0.6078	0.0531	0.0739	0.0193	0.0587	0.0312	0.0012
Sargan Statistic (p value)	0.7511	0.9697	0.5998	0.5660	0.4129	0.3735	0.9788	0.7164
Endogeneity test (p value)	0.0001	0.0000	0.0000	0.0001	0.0001	0.0624	0.0000	0.0000

Standard errors in parentheses,*** p<0.01, ** p<0.05, * p<0.1. Constant term, country fixed effects are included but not reported. They are available upon request. All instruments (distance donor-recipient, common language, donor tax rate, donor debt, donor inflation, donor budget surplus, donor agriculture share) are weighted by the share of aid flows provided by each donor in total aid received by each developing country.

F IV estimates with clustered standard errors

Table 13: Effect of donors' policy on economic growth with clustered standard errors

IV, Moving averages, 4 years, Country Fixed Effect, Clustered by country								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Effect on economic growth							
	Aid policy	Migration policy	Investment policy	Trade policy	Security policy	Technology policy	Environment policy	Consistency (only)
Equation	(3b)	(3b)	(3b)	(3b)	(3b)	(3b)	(3b)	(4)
Consistency	-0.247	1.065	1.929	1.303	0.673	2.022	0.706	1.028
	(4.804)	(3.953)	(2.804)	(3.176)	(5.006)	(4.298)	(2.693)	(3.340)
ΔConsistency	0.410**	0.477*	0.333**	0.436***	0.451**	0.636*	0.609	0.457***
	(0.175)	(0.283)	(0.150)	(0.153)	(0.180)	(0.345)	(0.421)	(0.155)
Paid	0.432							
	(2.159)							
ΔPaid	-0.0248							
	(0.0673)							
Pmigration		6.129						
		(7.711)						
ΔPmigration		-0.0459						
		(0.495)						
Pinvestment			2.554					
			(2.028)					
ΔPinvestment			-0.143					
			(0.169)					
Ptrade				0.650				
				(1.245)				
ΔPtrade				-0.00619				
				(0.222)				
Psecurity					0.342			
					(1.310)			
ΔPsecurity					0.0192			
					(0.0678)			
Ptechnology						0.158		
						(3.176)		
ΔPtechnology						-0.151		
						(0.153)		
Penvironment							1.117	
							(1.622)	
ΔPenvironment							-0.102	
							(0.151)	
Observations	290	299	299	299	290	290	290	299

Robust Standard errors in parentheses,*** p<0.01, ** p<0.05, * p<0.1. Statistics robust to heteroskedasticity and clustering on country. Constant term, country fixed effects are included but not reported. All exogenous variables are partialled-out. All instruments (distance donor-recipient, common language, donor tax rate, donor debt, donor inflation, donor budget surplus, donor agriculture share) are weighted by the share of aid flows provided by each donor in total aid received by each developing country.